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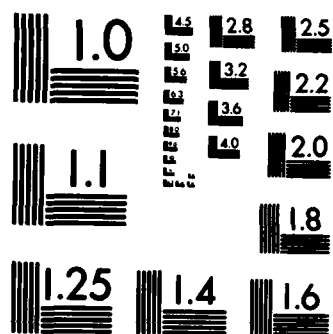
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MANPOWER, PERSONNEL, AND TRAINING IN
SYSTEM ACQUISITION: A BIBLIOGRAPHY

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July 1986

Interim Paper for Period September - December 1985

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Unclassified

B104 563

SECURITY CLASSIFICATION OF THIS PAGE

REPORT DOCUMENTATION PAGE

1a. REPORT SECURITY CLASSIFICATION Unclassified			1b. RESTRICTIVE MARKINGS		
2a. SECURITY CLASSIFICATION AUTHORITY			3. DISTRIBUTION/AVAILABILITY OF REPORT Approved for public release; distribution is unlimited.		
2b. DECLASSIFICATION/DOWNGRADING SCHEDULE					
4. PERFORMING ORGANIZATION REPORT NUMBER(S) AFHRL-TP-86-7			5. MONITORING ORGANIZATION REPORT NUMBER(S)		
6a. NAME OF PERFORMING ORGANIZATION Air Force Human Resources Laboratory		6b. OFFICE SYMBOL (if applicable) AFHRL/LRC		7a. NAME OF MONITORING ORGANIZATION	
6c. ADDRESS (City, State, and ZIP Code) Wright-Patterson Air Force Base, Ohio 45433-6503			7b. ADDRESS (City, State, and ZIP Code)		
8a. NAME OF FUNDING/SPONSORING ORGANIZATION Air Force Human Resources Laboratory		8b. OFFICE SYMBOL (if applicable) HQ AFHRL		9. PROCUREMENT INSTRUMENT IDENTIFICATION NUMBER	
9c. ADDRESS (City, State, and ZIP Code) Brooks Air Force Base, Texas 78235-5601			10. SOURCE OF FUNDING NUMBERS		
			PROGRAM ELEMENT NO. 62205F	PROJECT NO. 1710	TASK NO. 00
			WORK UNIT ACCESSION NO. 31		
11. TITLE (Include Security Classification) Manpower, Personnel, and Training in System Acquisition: A Bibliography					
12. PERSONAL AUTHOR(S) Boyle, Edward					
13a. TYPE OF REPORT Interim		13b. TIME COVERED FROM Sep 85 TO Dec 85		14. DATE OF REPORT (Year, Month, Day) July 1986	
15. PAGE COUNT 16					
16. SUPPLEMENTARY NOTATION					
17. COSATI CODES			18. SUBJECT TERMS (Continue on reverse if necessary and identify by block number)		
FIELD	GROUP	SUB-GROUP			
05	09		HARDMAN personnel weapon system design		
05	05		human factors training		
			manpower weapon system acquisition		
19. ABSTRACT (Continue on reverse if necessary and identify by block number)					
<p>This is a bibliography covering literature relevant to manpower, personnel, and training (MPT) analysis and planning during the weapon system design cycle. It covers documents produced by all Services, with particular emphasis on the HARDMAN (Hardware vs. Manpower) Comparability Analysis Method.</p>					
20. DISTRIBUTION/AVAILABILITY OF ABSTRACT <input checked="" type="checkbox"/> UNCLASSIFIED/UNLIMITED <input type="checkbox"/> SAME AS RPT. <input type="checkbox"/> DTIC USERS			21. ABSTRACT SECURITY CLASSIFICATION Unclassified		
22a. NAME OF RESPONSIBLE INDIVIDUAL Nancy A. Perigo, Chief, STINFO Office			22b. TELEPHONE (Include Area Code) (512) 536-3877		22c. OFFICE SYMBOL AFHRL/TSR

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83 APR edition may be used until exhausted.
All other editions are obsolete.SECURITY CLASSIFICATION OF THIS PAGE
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**HANPOWER, PERSONNEL, AND TRAINING IN
SYSTEM ACQUISITION: A BIBLIOGRAPHY**

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Submitted for publication by

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Logistics and Human Factors Division**

This publication is primarily a working paper. It is published solely to document work performed.

SUMMARY

This bibliography lists references to the literature on manpower, personnel, and training (MPT) and human factors analysis related to the system acquisition process. The list encompasses research reports, guides and handbooks, and case studies issued by all three Services and by Department of Defense contractors. The HARDMAN (HARDware vs. MANpower) Comparability Methodology of the Army and Navy, and HARDMAN's antecedents in the Air Force, are emphasized. Documents distributed since 1980 are featured, but important earlier work, going back to the 1960s, is also included.

PREFACE

The integrated analysis and evaluation of manpower, personnel, and training (MPT) issues in the system design and acquisition process has been an abiding interest of the Air Force Human Resources Laboratory. That interest is reflected, in part, in two research and development efforts currently underway within the Logistics and Human Factors Division: Task Identification and Evaluation System (TIES) - Work Unit 1710-00-31; and Small Unit Maintenance Manpower Analyses (SUMMA) - Work Unit 1710-00-04. Literature searching and cataloging efforts supporting both of these Work Units have produced large document files. It seemed timely to put together a bibliography tailored to the problem of MPT planning and analysis in system acquisition to aid other researchers in this topic area.

Susan Stiller, University of Dayton Research Institute, helped to track down documents and to verify bibliographic data. Terri Kerr, Universal Energy Systems, also helped in cataloging, typing lists, and kindred chores. Dr. William B. Askren gave valuable advice on the content of the bibliography. To all, all thanks.

MANPOWER, PERSONNEL, AND TRAINING IN SYSTEM ACQUISITION: A BIBLIOGRAPHY

INTRODUCTION

Making better, earlier estimates of the manpower, personnel, and training (MPT) impacts of new systems has been an important goal of the Air Force Human Resources Laboratory (AFHRL) for many years. Consequently, several useful methods, models, and procedures - which together comprise the MPT technology base - have been developed. The other Services, too, have made important contributions to this field and have recently moved ahead in packaging and proceduralizing MPT technology for practical application in military acquisitions.

This bibliography lists source documents relevant to MPT requirements estimation and design interaction during the weapon system acquisition process. The bibliography emphasizes Service literature - published, not-yet-published, and unpublished - on HARDMAN (HARDware vs. MANpower) applications in the Army and Navy. Also emphasized are AFHRL technical publications going back as far as the late 1960s which allow one to trace the lineage of HARDMAN to the Air Force's Coordinated Human Resources Technology (CHRT), and, later, to the Acquisition of Supportable Systems Evaluation Technology (ASSET). Also included, though less thoroughly, are human factors studies and technical publications relevant to the system design and acquisition process. The myriad of Department of Defense Directives, Air Force Regulations, and Military Standards and Specifications related to MPT, human factors, and logistics in acquisition are excluded since they have been cataloged elsewhere. Refer to the four Akman Associates's (1983a, 1983b, 1983c, 1983d) studies for example lists.

An attempt has been made to cover the field comprehensively since 1980, and to include the very latest literature. Meeting this latter goal has meant, in some instances, citing works that are not, as this is written, in final published form or available to the public. Meeting the former goal has meant, especially in the HARDMAN area, including documents whose information content duplicates or substantially overlaps information found in other documents. In choosing items for inclusion, the urge to be thorough often overruled the need for discrimination.

The renewed emphasis in the Air Force on better, earlier MPT planning for developing weapon systems is taking several forms. One is the establishment of an MPT focal point within the Aeronautical Systems Division (ASD) of the Air Force Systems Command to integrate and manage MPT analysis efforts. Another is the call for more coordinated, concerted applications of existing MPT technology, and for improved MPT technologies with greater transition potential. The proposed Air Force Manpower, Personnel, and Training Information System (MPTIS) for tracking MPT requirements and resources for all new weapon systems is an important new application that will build on existing knowledge and technology.

These new efforts should benefit greatly from ready access to the accumulated knowledge and experience in MPT analysis embodied by this bibliography. To be sure, a review and analysis of this accretion of literature would be even more beneficial and should be done. In particular, the potential utility of the HARDMAN approach in meeting Force MPT analysis needs now and in the future must be determined. The present effort is a small but perhaps important step toward that larger goal.

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